does not admit this inference., and bases his view of " currents of tendency " on the phenomena presented by this body and its non-action with nitric acid.[1] My own results confirm those of M. de la Rive, for by direct experiment I find that the peroxide is acted upon by such bodies as nitric acid. Potash and pure strong nitric acid boiled on peroxide of lead readily dissolved it, forming protonitrate of lead. A dilute nitric acid was made and divided into two portions; one was tested by a solution of sulphuretted hydrogen, and showed no signs of lead: the other was mingled with a little peroxide of lead (810) at common temperatures, and after an hour filtered and tested in the same manner, and found to contain plenty of lead.

1032. The peroxide of lead is negative to platinum in solutions of common salt and potash, bodies which might be supposed to exert no chemical action on it. But direct experiments •show that they do exert sufficient action to produce all the ^effects. A circumstance in further proof that the current in the voltaic circuit formed by these bodies is chemical in its origin is the rapid depression in the force of the current pro- duced, after the first moment of immersion.

1033. The most powerful arrangement with peroxide of lead, platinum, and one fluid, was obtained by using a solution of the yellow sulphuret of potassium as the connecting fluid. A convenient mode of making such experiments was to form the peroxide into a fine soft

paste with a little distilled water, to cover the lower extremity of a platinum plate uniformly with this paste, using a glass rod for the purpose, and making the coat only thick enough to hide the platinum well, then to dry it well, and finally, to compare that plate with a clean platinum plate in the electrolyte employed. Unless the platinum plate were perfectly covered, local electrical currents took place which interfered with the result. In this way, the peroxide is easily shown to be negative to platinum either in the solution of the sulphuret of potassium or in nitric acid. Red lead gave the same results in both these fluids.

1034. But using this sulphuretted solution, the same kind of proof in support of the chemical theory could be obtained from protoxides as before from the peroxides. Thus, some pure protoxide of lead, obtained from the nitrate by heat and fusion, was applied on the platinum plate (1033), and found to be strongly negative to metallic platinum in the solution of

[1] *Philosophical Magazine,* 1838, xii. 226, 311; and *Bibliothdque Universelle,* 1838, xiv. 155.